

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

VANTAGE MICRO LLC,

Plaintiff,

v.

**NXP SEMICONDUCTORS N.V., NXP B.V.,
and NXP USA, INC.,**

Defendants.

Civil Action No. 6:19-cv-00584

DEMAND FOR JURY TRIAL

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Vantage Micro LLC (“Vantage Micro” or “Plaintiff”) hereby alleges for its Complaint for patent infringement against Defendants NXP Semiconductors N.V. (“NXP N.V.”), NXP B.V., and NXP USA, Inc. (“NXP USA”) (collectively “NXP” or “Defendants”) on personal knowledge as to its own actions and on information and belief as to the actions of others, as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

THE PARTIES

2. Plaintiff Vantage Micro is a limited liability company organized under the laws of the State of Delaware, with its principal place of business at 717 North Union Street, Suite 9, Wilmington, DE 19805.

3. On information and belief, NXP N.V. is a public limited liability company organized and existing under the laws of The Netherlands, and that has a place of business at High Tech Campus 60, 5656 AG Eindhoven, The Netherlands.

4. On information and belief, NXP B.V. is a private company with limited liability organized and existing under the laws of The Netherlands, and that NXP B.V. has a place of business at High Tech Campus 60, 5656 AG Eindhoven, The Netherlands.

5. On information and belief, NXP USA, Inc. is a corporation organized and existing under the laws of the state of Delaware that has its principal place of business at 6501 William Cannon Drive West, Austin, TX 78735, and that Corporation Service Company d/b/a CSC-Lawyers Inc., located at 211 E. 7th Street, Suite 620, Austin, Texas 78701, is a registered agent for service. On information and belief, NXP USA is a wholly owned subsidiary of NXP B.V. and is controlled by and/or acts as an agent of NXP B.V.

6. On information and belief, NXP designs, develops, manufactures, sells, offers to sell, and imports a wide range of electronic products and components, including, inter alia, interfaces and interface components, microcontrollers, processors, bare die products, wafers, and sensors.

7. On information and belief, NXP makes, uses, sells, offers to sell, markets, and imports its products and services throughout the United States, including in this District, through its website and other media, through major electronics retailers in North America, and in concert and partnership with third parties who sell NXP's products, either exclusively or together with others.

8. Vantage Micro is the assignee and owner of the patents at issue in this action: U.S. Patents Nos. 6,678,838, 7,414,606, and 6,546,508 (collectively, the "Asserted Patents"). Vantage Micro holds all substantial rights, title, and interest in the Asserted Patents, including the exclusive right to sue NXP for infringement and recover damages, including damages for past infringement.

9. Vantage Micro seeks monetary damages and prejudgment interest for NXP's past and ongoing direct and indirect infringement of the Asserted Patents.

JURISDICTION AND VENUE

10. This action for patent infringement arises under the patent laws of the United States, Title 35 of the United States Code.

11. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

12. NXP is subject to this Court's general and specific personal jurisdiction because NXP has sufficient minimum contacts with the forum as a result of business conducted within the State of Texas and within the Western District of Texas, pursuant to due process and/or the Texas Long Arm Statute, Tex. Civ. Prac. & Rem. Code § 17.042. On information and belief, NXP contracted with one or more Texas residents in this District and one or both parties performed the contract at least in part in the State of Texas and this District; NXP committed the tort of patent infringement in State of Texas and this District; NXP purposefully availed itself of the privileges of conducting business in the State of Texas and in this District; NXP regularly conducts and solicits business within the State of Texas and within this District; NXP recruits residents of the State of Texas and this District for employment inside or outside the State of Texas; Plaintiff's causes of action arise directly from NXP's business contacts and other activities in the State of Texas and this District; and NXP distributes, makes available, imports, sells and offers to sell products and services throughout the United States, including in this judicial District, and introduces infringing products and services that into the stream of commerce knowing that they would be used and sold in this judicial district and elsewhere in the United States.

13. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b) at least because NXP N.V. and NXP B.V. are foreign entities are foreign corporations and are subject to

jurisdiction in this District, because NXP is subject to personal jurisdiction in this district and has regularly conducted business in this District, and because certain of the acts complained of herein occurred in this District. On information and belief, NXP makes, uses, sells, offers to sell, and/or imports, within the state of Texas and in this District, products that infringe one or more claims of the Asserted Patents. Venue is proper in this judicial district under 28 U.S.C. § 1391 and 28 U.S.C. § 1400(b).

THE ASSERTED PATENTS

14. On January 13, 2004, the United States Patent and Trademark Office (“USPTO”) duly and legally issued U.S. Patent No. 6,678,838 (“the ’838 Patent”), entitled “Method to Track Master Contribution Information in a Write Buffer.” A copy of the ’838 Patent is attached hereto as Exhibit 1.

15. Vantage Micro owns all substantial right, title, and interest in the ’838 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

16. On August 19, 2008, the USPTO duly and legally issued U.S. Patent No. 7,414,606 (“the ’606 Patent”), entitled “Method and Apparatus for Detecting a Flat Panel Display Monitor.” A copy of the ’606 Patent is attached hereto as Exhibit 2.

17. Vantage Micro owns all substantial right, title, and interest in the ’606 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

18. On May April 8, 2003, the USPTO duly and legally issued U.S. Patent No. 6,546,508 (“the ’508 Patent”), entitled “Method and Apparatus for Fault Detection of a Processing Tool in an Advanced Process Control (APC) Framework.” A copy of the ’508 Patent is attached hereto as Exhibit 3.

19. Vantage Micro owns all substantial right, title, and interest in the '508 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

COUNT I - INFRINGEMENT OF U.S. PATENT NO. 6,678,838

20. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

21. At least as of May 9, 2018, Vantage Micro placed NXP on actual notice of the '838 Patent and provided actual notice that its actions constituted and continue to constitute infringement of one or more claims of the Asserted Patents. NXP has had actual knowledge of the '838 Patent and its own infringement of the '838 Patent since at least that time.

22. NXP has infringed one or more claims of the '838 Patent, including but not limited to Claim 11, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, at least by using electronic products wherein multiple masters (including but not limited to computer processors, processor cores, graphics processors, and noncore master peripherals) write data to a memory (including but not limited to shared memory), where the memory includes information to associate a master with the data ("838 Infringing Products").

23. Discovery is expected to uncover the full extent of NXP's infringement of the '838 Patent beyond the '838 Infringing Products already identified through public information.

24. Attached hereto as Exhibit 4, and incorporated by reference herein, is a claim chart detailing how the representative QorIQ® Layerscape 1024A Dual-Core Communications Processor, which is one of the '838 Infringing Products, satisfies each element of independent Claim 11 of the '838 patent. On information and belief, any use of the QorIQ® Layerscape 1024A Dual-Core Communications Processor necessarily practices the method of Claim 11 of the '838 Patent.

25. On information and belief, NXP has induced and continues to induce infringement of one or more claims of the '838 Patent, including, but not limited to Claim 11, pursuant to 35 U.S.C. § 271(b), by encouraging its customers of the '838 Infringing Products and other third parties (including, *inter alia*, the downstream customers of its customers) to make, use, sell, offer to sell, and/or import in the United States without authorization the '838 Infringing Products (or products of which the '838 Infringing Products are components) as described above. NXP has engaged in acts of inducement with the knowledge (at least as of May 9, 2019) that such actions constituted infringement of one or more claims of the '838 Patent and the specific intent to encourage that infringement.

26. NXP's acts of inducement include, *inter alia*: providing the '838 Infringing Products to its customers and other third parties and intending them to use the '838 Infringing Products; advertising these products through its own and third-party websites (*see, e.g.*, <https://www.nxp.com/products/processors-and-microcontrollers/arm-processors/layerscape-communication-process/qoriq-layerscape-1024a-dual-core-communications-processor:LS1024A>); providing potential customers with instructions on how to obtain these products and warranting the products when obtained through authorized distribution networks (*see, e.g.*, https://www.nxp.com/products/processors-and-microcontrollers/arm-processors/layerscape-communication-process/qoriq-layerscape-1024a-dual-core-communications-processor:LS1024A?tab=Buy_Parametric_Tab#); and providing support and training to enable customers to use the products in an infringing way (*see, e.g.*, https://www.nxp.com/products/processors-and-microcontrollers/arm-processors/layerscape-communication-process/qoriq-layerscape-1024a-dual-core-communications-processor:LS1024A?tab=Design_Support_Tab).

27. On information and belief, NXP has contributed to infringement of one or more claims of the '838 Patent under 35 U.S.C. § 271(c), including, but not limited to Claim 11, by offering to sell or selling into the United States and/or importing into the United States without authorization one or more components of the '838 Infringing Products (or products of which the '838 Infringing Products are components) with the knowledge (at least as of May 14, 2019) that such component(s) are especially made or especially adapted for use in an infringement of the '838 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

28. Vantage Micro has suffered, and continues to suffer, damages as a result of NXP's infringement of the '838 Patent.

29. NXP continued to infringe the '838 Patent from at least May 9, 2019 until its expiration, despite being on notice of the '838 Patent and its infringement. NXP has therefore infringed the '838 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 9, 2018, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

30. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 4) for the '838 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT II - INFRINGEMENT OF U.S. PATENT NO. 7,414,606

31. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

32. At least as of May 9, 2019, Vantage Micro placed NXP on actual notice of the '606 Patent and actual notice that its actions constituted and continue to constitute infringement of the '606 Patent. NXP has had actual knowledge of the '606 Patent and its own infringement of the '606 Patent since at least that time.

33. NXP has infringed and continues to infringe one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, offering to sell, and/or importing in the United States without authority products, devices, systems, and/or components of systems that detect, or support the detection of, monitors, including but not limited to Liquid Crystal Display ("LCD"), Light-Emitting Diode ("LED"), and Plasma Display Panel ("PDP") monitors using various connection interfaces or "ports," including but not limited to High-Definition Multimedia Interface ("HDMI"), DisplayPort ("DP"), and/or Digital Visual Interface ("DVI") connections that support or comply with the HDMI, DP, and/or DVI specification ("'606 Infringing Products"). The '606 Infringing Products include, as examples and without limitation without limitation, NXP's processors (e.g., i.MX 8 series, including i.MX 8 and i.MX 8M Dual/8M QuadLite/8M Quad, Layerscape series (e.g., LS1028A), and i.MX 7 series (e.g., i.MX 7 Dual)), SABRE platforms (e.g., RDIMX53SABRETAB), adapters (e.g., AN10873/ PTN3392 and AN11415/PTN3355), transmitters (e.g., TDA9983), evaluation and development boards (e.g., i.MX6 SABRE Base Boards), evaluation kits and accessory/quick start boards (e.g., i.MX 8M

EVK, i.MX 7ULP, MCIMX8M-EVK, i.MX 8M Quad EVK, IMX-RMII-BRPHY, IMX-MIPI-HDMI, IMX50EVK and IMX53QSB.

34. Discovery is expected to uncover the full extent of NXP's infringement of the '606 Patent beyond the '606 Infringing Products already identified through public information.

35. Attached hereto as Exhibit 5, and incorporated by reference herein, is a claim chart detailing how a '606 Infringing Product, NXP's i.MX 8, infringes independent claim 6 of the '606 Patent. Each and every element of Claim 6 is found in this product as shown in Exhibit 5. NXP is (by its actions) directly infringing, literally infringing, and/or infringing the '606 Patent under the doctrine of equivalents. NXP is thus liable for infringement of the '606 Patent pursuant to 35 U.S.C. § 271.

36. On information and belief, NXP has induced and continues to induce infringement of one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(b) by encouraging its customers of the '606 Infringing Products and other third parties (including, *inter alia*, the downstream customers of its customers) to make, use, sell, offer to sell, and/or import in the United States without authorization the '606 Infringing Products (or products of which the '606 Infringing Products are components.

37. NXP's acts of inducement include, without limitation: providing the '606 Infringing Products to its customers and other third parties and intending them to use the '606 Infringing Products with hardware, software, and other infrastructure that enable and/or make use of these products; providing information, advertising, and instructions for these products through its own and third-party websites (*see, e.g.*, <https://www.nxp.com/products/processors-and-microcontrollers/arm-processors/i.mx-applications-processors/i.mx-8-processors:IMX8-SERIES> and <https://www.solid-run.com/nxp-family/>); encouraging customers and other third

parties to communicate directly with NXP representatives about these products for purposes of technical assistance and repair as well as sales and marketing (*see, e.g.*, <https://www.nxp.com/support/support:SUPPORTHOME> and <https://community.nxp.com/community/imx?tid=community> (providing consumers with a “Technical Communities,” “Support Requests,” and “Chat” with a NXP support agent to address technical concerns regarding the ’606 Infringing products); *see also* <https://www.nxp.com/design/i.mx-developer-resources/i.mx-software-and-development-tool:IMX-SW> (providing software and development tools for some of the ’606 Infringing Products)); encouraging customers and other third parties to use the ’606 Patent Infringing Products (e.g., <https://www.nxp.com/docs/en/brochure/75017017.pdf> (recommending consumers to use the ’606 Accused Functionalities, including HDMI, DP, and/or DVI connection(s), for use with the ’606 Infringing Products)); and providing instructions on how to use the ’606 Infringing Products (e.g., <https://community.nxp.com/thread/498765> (offering instructions on how to implement the ’606 Accused Functionalities)).

38. For example, NXP’s technical documentation supplied with a ’606 Infringing Product, the i.MX 8, instructs users to configure the i.MX 8 for use with HDMI, DisplayPort, and/or DVI connections (*see, e.g.*, i.MX8M Hardware Developer’s Guide, *available at* <https://www.nxp.com/webapp/Download?colCode=IMX8MDQLQHDG> (last accessed Aug. 6, 2019)).

39. NXP performed acts of inducement despite its actual knowledge since at least May 9, 2019, of the ’606 Patent and its knowledge that the specific actions it actively induced and continues to actively induce on the part of its customers and other third parties constitute infringement of the ’606 Patent. At the very least, because NXP has been, and remains, on notice

of the '606 Patent and the accused infringement, it has been, and remains, willfully blind regarding the infringement that it has induced and continues to induce.

40. On information and belief, NXP has contributed to, and continues to contribute to, infringement of one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(c) by offering to sell or selling within the United States, importing and/or supplying in the United States without authority one or more components of the '606 Infringing Products (or products of which the '606 Infringing Products are components) with the knowledge (at least as of May 14, 2019) that such components are especially made or especially adapted for use in an infringement of the '606 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

41. For example, these components detect, or support the detection of, a monitor and are also the critical and material component to displaying, or controlling the display of, images on mobile phones, personal computers, servers, notebook computers, televisions, and other consumer media products according to the claimed invention. NXP supplied, and continues to supply, system on-chip components, products, or devices, including, without limitation, the '606 Infringing Products, or components thereof, with the knowledge of the '606 Patent and with the knowledge that these components constitute critical and material parts of the claimed inventions of the '606 Patent. Moreover, NXP knows at least by virtue of its knowledge of its own products and the '606 Patent that these components are especially made and/or especially adapted for use as claimed in the '606 Patent and there is no substantial non-infringing use of these components.

42. NXP has directly and indirectly infringed the '606 Patent and is thus liable for infringement of the '606 Patent pursuant to 35 U.S.C. § 271.

43. Vantage Micro has suffered, and continues to suffer, damages as a result of NXP's infringement of the '606 Patent.

44. NXP has continued to infringe the '606 Patent since at least May 9, 2019, despite being on notice of the '606 Patent and its infringement. NXP has therefore infringed the '606 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 9, 2019, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

45. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 5) for the '606 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT III - INFRINGEMENT OF U.S. PATENT NO. 6,546,508

46. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

47. At least as of the filing and service of this Complaint, Vantage Micro has placed NXP on actual notice of the '508 Patent and actual notice that its actions constituted and continue to constitute infringement of the '508 Patent.

48. On information and belief, NXP has infringed and continues to infringe one or more claims of the '508 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, at least by its use of Inficon FabGuard® FDC or a similar system at its fabrication facility in Austin, Texas to manufacture or produce semiconductor products (“’508 Infringing Products”).

49. Attached hereto as Exhibit 6, and incorporated by reference herein, is a claim chart detailing how NXP’s implementation of Inficon FabGuard® FDC or a similar system directly infringes the method claimed in Claim 1 of the ’508 Patent.

50. On information and belief, NXP implements substantially similar methods throughout its fabrication facilities in the United States and overseas and imports the products it manufactures overseas into the United States.

51. On information and belief, NXP has infringed at least Claim 1 of the ’508 Patent, pursuant to 35 U.S.C. § 271(g), by importing into the United States, selling, offering to sell, or using within the United States products that NXP or a corporate affiliate of NXP has created overseas using a process that implements the claimed method of the ’508 Patent.

52. NXP has directly infringed the ’508 Patent and is thus liable for infringement of the ’508 Patent pursuant to 35 U.S.C. § 271.

53. Vantage Micro has suffered, and continues to suffer, damages as a result of NXP’s infringement of the ’508 Patent.

54. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 6) for the ’508 Patent to satisfy the notice

requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Vantage Micro demands judgment for itself and against Defendants as follows:

- a. A judgment that NXP has infringed, and continues to infringe, one or more claims of each of the Asserted Patents;
- b. A judgment that NXP has induced infringement, and continues to induce infringement, of one or more claims of each of the Asserted Patents other than the '508 Patent;
- c. A judgment that NXP has contributed to, and continues to contribute, to the infringement of one or more claims of each of the Asserted Patents other than the '508 Patent;
- d. A judgment that NXP has willfully infringed one or more claims of each of the Asserted Patents;
- e. A judgment awarding Vantage Micro all damages adequate to compensate for NXP's infringement, and in no event less than a reasonable royalty for NXP's acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate allowed by law;
- f. A judgment awarding Vantage Micro treble damages pursuant to 35 U.S.C. § 284 as a result of NXP's willful conduct;
- g. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Vantage Micro its reasonable attorneys' fees; and
- h. A judgment awarding Vantage Micro such other relief as the Court may deem just and equitable.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff Vantage Micro demands a trial by jury of this action.

Dated: October 8, 2019

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